



City of Huntington Beach
Department of Building & Safety
COOL ROOF REQUIREMENTS

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COOL ROOF PRESCRIPTIVE REQUIREMENTS
2013 California Building Energy Efficiency Standards
City of Huntington Beach Climate Zone = 6

Residential Requirements- Sec. 150.2(b)1H

No requirements

Non-Residential Requirements- Sec. 141(b)2Bi

For nonresidential buildings, high-rise residential buildings, and hotels/motels, where more than 50 percent of the roof or more than 2,000 square feet of roof, whichever is less, is being replaced, recovered or recoated, this altered roof area shall meet the following prescriptive requirements for new construction:

Roof Slope*	Minimum Aged Reflectance / Thermal Emittance	Or Minimum Solar Reflectance Index (SRI)	Insulation R-value <i>See exceptions</i>	Insulation U-factor <i>See exceptions</i>
Low slope	0.63 / 0.75	75	R-8	0.082
Steep slope	0.20 / 0.75	16	NR	NR

* Low slope roof is surface with pitch less than or equal to 2:12; Steep slope roof is pitch greater than 2:12

High-rise Residential, Hotels and Motels- Sec. 141(b)2Bii

Roof Slope*	Minimum Aged Reflectance / Thermal Emittance	Or Minimum Solar Reflectance Index (SRI)	Insulation R-value	Insulation U-factor
Low slope	NR	NR	NR	NR
Steep slope	0.20 / 0.75	16	NR	NR

* Low slope roof is surface with pitch less than or equal to 2:12; Steep slope roof is pitch greater than 2:12

Exceptions to Prescriptive Requirements-141.0(b)2Bi, and 141.0(b)2Bii

- Roofing products are not required to meet the prescriptive requirements for solar reflectance, thermal emittance, or SRI when:
 - The roof area is covered by photo-voltaic panels
 - The roof membrane is covered by construction with a thermal mass of 25lb/ft²

Exceptions to Insulation Requirements-141.0(b)2Biii

- The existing roof is insulated with at least R-7 insulation or it has a U-factor lower than 0.089.
- If mechanical equipment is located on the roof and it will not be disconnected and lifted as part of the roof replacement, insulation added may be limited to the maximum insulation thickness that will allow a height of 8 inches (203 mm) from the roof membrane surface to the top of the base flashing.
- If adding the required insulation will reduce the base flashing height to less than 8 inches (203 mm) at penthouse or parapet walls, the insulation added may be limited to the maximum insulation thickness that will allow a height of 8 inches (203 mm) from the roof membrane surface to the top of the base flashing, provided that the conditions in subsections i through iv apply:
 - The penthouse or parapet walls are finished with an exterior cladding material other than the roofing covering membrane material; AND
 - The penthouse or parapet walls have exterior cladding material that must be removed to install the new roof covering membrane to maintain a base flashing height of 8 inches (203 mm); AND
 - For nonresidential buildings, the ratio of the replaced roof area to the linear dimension of affected penthouse or parapet walls shall be less than 100 square feet per linear foot; AND
 - For high-rise residential buildings, hotels or motels, the ratio of the replaced roof area to the linear dimension of affected penthouse or parapet walls shall be less than 25 square feet per linear foot.

- v. Tapered insulation may be used which has a thermal resistance less than that prescribed in Table 141.0-C at the drains and other low points, provided that the thickness of insulation is increased at the high points of the roof so that the average thermal resistance equals or exceeds the value that is specified in Table 141.0-C.

Resources

California Energy Commission:	http://www.energy.ca.gov/title24/
California Energy Commission Hotline:	800-772-3300 / title24@energy.state.ca.us
Cool Roof Rating Council:	www.coolroofs.org / 866-465-2523
CABEC (Calif. Assoc. of Building Energy Consultants)	www.cabec.org / 866-360-4002